



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/691,570

10/24/2003

Shigeru Nemoto

244406US2

6947

22850

7590

02/03/2009

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

CWERN, JONATHAN

ART UNIT

PAPER NUMBER

3737

NOTIFICATION DATE

DELIVERY MODE

02/03/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,570	<b>Applicant(s)</b> NEMOTO, SHIGERU	
	<b>Examiner</b> Jonathan G. Cwern	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

The abstract of the disclosure is objected to because it is greater than 150 words in length. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14-17, and 19-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duchon 2003/0018252 in view of Langlotz 6,366,683 and Uber 5,840,026.

3. Regarding claim 1 Duchon discloses: a liquid injection mechanism (10 figs 1a, 1b), condition storage means (paras 20 and 22) and injection control means (para 22 where different injection procedures can be controlled by manually touching a screen to choose portions of a human anatomy). However, Duchon does not disclose the following limitations: image storage means, section display means, section input means, region displaying means, region input means, operation reading means, liquid display means, liquid storage means, liquid reading means, liquid input means, condition storage means, operation reading means, operation adjusting means, and

Art Unit: 3737

liquid items represent the concentration of an effective component of the contrast medium.

4. Langlotz teaches within the same field of endeavor: image storage means (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20), section display means (52 fig 2), section input means (50 and 52 fig 2; col 5, ll. 31-45; col 6, ll. 46-57, col 8, ll. 6-20), region displaying means (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20), region input means (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20), operation reading means (col 6, ll. 46-57; col 6, l. 66 - col 7, l. 14; col 8, ll. 6-20 where anatomical region is selected and data specific to that region is retrieved).

5. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz in order to provide a system with graphics that would be “easily interpreted by a referring physician,” as taught by Langlotz (col 4, ll. 50-58).

6. Uber teaches within the same field of endeavor: liquid display means (52 and 54 fig 3a; col 6, ll. 31-52; col 9, ll. 2-12), liquid storage means (col 6, ll. 31-52; col 9, ll. 2-23), liquid reading means (col 6, ll. 31-52; col 9, ll. 2-23), liquid input means (col 6, ll. 31-52; col 9, ll. 2-23), condition storage means (col 6, ll. 31-52; col 9, ll. 2-23), operation reading means (col 6, ll. 31-52; col 9, ll. 2-23), operation adjusting means (col 6, ll. 31-52; col 9, ll. 2-23), and liquid items represent the concentration of an effective component of the contrast medium (col 6, ll. 31-52; col 8, ll. 8-16; Table 1 teaching relationship between liquid item type/concentration and volume of Iodine).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to “continuously adjust fluid [parameters]...to optimally adapt the dosing to patient specific parameters...saving money and reducing patient risk ” as taught by Uber (col 10, ll. 31-47). While it is not specifically stated that the contrast type is displayed, a variety of other stored data is displayed, and it would be an obvious modification to also display the contrast type (product name).

7. Regarding claim 2, Duchon discloses: a medium injection mechanism (52 and 10 fig 1) and a solution injection mechanism (50 and 10 fig 1). However, Duchon does not disclose the following limitations: means for storing data of operating conditions and means for controlling operation of medium injection mechanism and solution injection mechanism. Uber teaches within the same field of endeavor: means for storing data of operating conditions (col 2, ll. 17-31; col 3, ll. 14-18 where operating conditions for each body region is read upon as an injection profile), and means for controlling operation of medium injection mechanism and solution injection mechanism which are interlinked under the operating conditions (col 2, ll. 17-31; col 3, ll. 14-18).

8. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to provide “the appropriate injection flow rate and concentration for a given patient based on patient information entered into the system,” as taught by Uber (col 2, ll. 56-59).

9. Regarding claim 3, Duchon discloses the invention as claimed and as discussed above. However, Duchon does not disclose the following limitations: means for storing

Art Unit: 3737

data of a variable pattern in which an injection rate of the contrast medium is changed with time to keep fluoroscopic image in a predetermined contrast range, means for changing, with time, an operating speed of the liquid injection mechanism depending on variable pattern. Uber teaches within the same field of endeavor: means for storing data of a variable pattern in which an injection rate of contrast medium is changed with time to keep fluoroscopic image in a predetermined contrast range (col 3, ll. 14-28; col 12, ll. 6-26), means for changing, with time, an operating speed of liquid injection mechanism depending on variable pattern (col 3, ll. 14-28; col 12, ll. 6-26).

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to provide “the best image quality for the particular patient,” as taught by Uber (col 3, ll. 25-28).

11. Regarding claim 4, Duchon discloses the invention as claimed and as discussed above. However, Duchon does not disclose the following limitations: means for storing the data of the variable pattern in which the contrast of the fluoroscopic image produced by the contrast medium approximates an optimum level. Uber teaches within the same field of endeavor: means for storing the data of the variable pattern in which the contrast of the fluoroscopic image produced by the contrast medium approximates an optimum level (col 3, ll. 25-28).

12. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to provide “the best image quality for the particular patient,” as taught by Uber (col 3, ll. 25-28).

Art Unit: 3737

13. Regarding claim 5, Duchon discloses: body display means (fig 30), body input means (para 180 and 181), means for storing operating conditions for each of body items (para 20 and 22), and means for reading the data of the operating conditions corresponding to the selected body item (para 20 and 22).

14. Regarding claim 6, Duchon discloses: body display means (fig 30), body input means (para 180 and 181), and operation adjusting means (para 20 and 22).

15. Regarding claim 7, Duchon discloses: body input means (fig 30) and operation adjusting means (para 20 and 22).

16. Regarding claim 9, Duchon discloses the invention as claimed and as discussed above. However, Duchon does not disclose the following limitations: means for entering the data on-line from an external database device. Langlotz teaches within the same field of endeavor: means for entering the data on-line from an external database device (20 fig 1; col 4, l. 66 - col 5, l. 16).

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz in order to “enable ... any image analyst to call up from a database basic identifying information about an image” to provide a system with graphics that would be “easily interpreted by a referring physician,” as taught by Langlotz (col 4, ll. 50-58).

18. Regarding claim 10, Duchon discloses: means for detecting the data of body items from subject and entering the detected data of body items (para 197).

19. Regarding claim 11, Duchon discloses: body items include at least one of a body weight, a body shape, an age, and a gender (para 197).

Art Unit: 3737

20. Regarding claims 12 and 14-17, Duchon in view of Langlotz discloses the invention as claimed and as discussed above. However, Duchon in view of Langlotz does not disclose the following limitations: liquid display means, liquid storage means, liquid reading means, liquid input means, condition storage means, operation reading means and operation adjusting means. Uber teaches within the same field of endeavor: liquid display means (52 and 54 fig 3a; col 6, ll. 31-52; col 9, ll. 2-12), liquid storage means (col 6, ll. 31-52; col 9, ll. 2-23), liquid reading means (col 6, ll. 31-52; col 9, ll. 2-23), liquid input means (col 6, ll. 31-52; col 9, ll. 2-23), condition storage means (col 6, ll. 31-52; col 9, ll. 2-23), operation reading means (col 6, ll. 31-52; col 9, ll. 2-23) and operation adjusting means (col 6, ll. 31-52; col 9, ll. 2-23).

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to “continuously adjust fluid [parameters]...to optimally adapt the dosing to patient specific parameters...saving money and reducing patient risk ” as taught by Uber (col 10, ll. 31-47).

22. Regarding claim 19, Duchon discloses: a plurality of imaging diagnostic apparatus types (fig 32; para 180) having different imaging items (paras 197-203 disclosing items such as flow rate, volume, rise time, etc...), imaging apparatus display means (fig 32), imaging apparatus input means (paras 180 and 181), means for storing the data of operating conditions for the types of the imaging diagnostic apparatus (para 180), and operation reading means (para 180).



Art Unit: 3737

23. Regarding claim 20, Duchon discloses: imaging storage means (paras 197-203), imaging display means (fig 32), imaging input means (paras 180 and 181), imaging reading means (paras 197-203) and operation adjusting means (paras 180 and 181).

24. Regarding claim 21, Duchon discloses: imaging display means (fig 32), imaging input means (paras 180 and 181), means for storing the data of operating conditions (para 180), and means for reading the data of operating conditions corresponding to the selected imaging item (paras 197-203).

25. Regarding claim 22, Duchon discloses: imaging display means (fig 32), imaging input means (paras 180 and 181) and operation adjusting means (paras 180, 197-203).

26. Regarding claim 23, Duchon discloses: imaging input means (paras 180 and 181) and operation adjusting means (paras 180, 197-203).

27. Regarding claim 24, Duchon discloses: means for accepting an input action to enter data of the selected imaging item (paras 180 and 181).

28. Regarding claims 26 and 28, Duchon discloses the invention as claimed and as discussed above. However, Duchon does not disclose the following limitations: means for entering the data of the selected imaging item on-line. Uber teaches within the same field of endeavor: means for entering the data of the selected imaging item on-line (fig 3a; col 6, ll. 7-31).

29. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to allow for "automatic adjustment of the system," as taught by Uber (col 6, ll. 29-30).

Art Unit: 3737

30. Regarding claim 29, Duchon discloses: imaging speed of fluoroscopic image (figs 32 and 33).

31. Regarding claims 8, 25, 27 and 30, Duchon discloses: medium loading means and input means for entering data from information storage medium which is loaded (fig 11A; para 15-18 disclosing a personal computer). While not positively disclosed, Examiner takes official notice that it is notoriously well known in the art to include a removably loading data storage device with a personal computer such as a Compact Disc Read-Only Memory (CD-ROM), floppy disk or solid state flash drive.

32. Regarding claim 31, Duchon discloses the invention as claimed and as discussed above. However, Duchon does not disclose the following limitations: means for entering the data of operating conditions on-line, and condition updating means for updating the data of operating conditions with the data of operating conditions entered on-line. Uber teaches within the same field of endeavor: means for entering the data of operating conditions on-line (fig 3a; col 6, ll. 7-31), and condition updating means for updating the data of operating conditions with the data of operating conditions entered on-line (col 6, ll. 7-31; col 6, ll. 45-52).

33. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to allow for "automatic adjustment of the system," as taught by Uber (col 6, ll. 29-30).

34. Regarding claim 32, Duchon discloses: operation display means (fig 4), operation manual input means (fig 4; paras 111, 119-124), and condition updating means (paras 197-206).

Art Unit: 3737

35. Regarding claim 33, Duchon discloses: operation display means (fig 4), operation manual input means (fig 4; paras 111, 119-124) and operation adjusting means (fig 4; paras 111, 119-124).

36. Regarding claim 34, Duchon discloses: an injection head (fig 1), a display panel connected parallel to injection head (fig 1), means for moving cylinder and piston relatively to each other (fig 1; paras 63-68). However, Duchon does not disclose the following limitations: section display means and region displaying means. Langlotz teaches within the same field of endeavor: section display means (52 fig 2) and region displaying means (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20).

37. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz in order to provide a system with graphics that would be “easily interpreted by a referring physician,” as taught by Langlotz (col 4, ll. 50-58).

38. Regarding claim 35, Duchon discloses: a touch panel (58 fig 1; para 22). However, Duchon does not disclose the following limitations: section input means and region input means. Langlotz teaches within the same field of endeavor: section input means (50 and 52 fig 2; col 5, ll. 31-45; col 6, ll. 46-57, col 8, ll. 6-20) and region input means (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20).

39. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz in order to provide a system with graphics that would be “easily interpreted by a referring physician,” as taught by Langlotz (col 4, ll. 50-58).

Art Unit: 3737

40. Regarding claim 36, Duchon discloses: pressure detecting means (para 76) and pressure displaying means (514 fig 30; para 76).

41. Regarding claim 37, Duchon discloses: storing data of operating conditions (paras 20 and 22), reading the data of operating conditions corresponding to the selected one of regions (paras 20 and 22), and controlling operation of the liquid injection mechanism under the operating conditions whose data have been read (paras 20 and 22). However, Duchon does not disclose the following limitations: storing data of schematic images of body sections and regions, displaying the body sections in the shape of a human body, receiving an input action to select one of the body sections, displaying at least one of regions in relation to the selected section, receiving an input action to select one of the regions, storing data of said concentration and a product name, displaying said product name, accepting an input to select a product name, reading data of the concentration, and adjusting said operating conditions depending on the read data of the product name.

42. Langlotz teaches within the same field of endeavor: storing data of schematic images of body sections and regions (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20), displaying the body sections in the shape of a human body (52 fig 2), receiving an input action to select one of the body sections (50 and 52 fig 2; col 5, ll. 31-45; col 6, ll. 46-57, col 8, ll. 6-20), displaying at least one of regions in relation to the selected section (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20) and receiving an input action to select one of the regions (50 and 52 fig 2; col 6, ll. 46-57, col 8, ll. 6-20).

Art Unit: 3737

43. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz in order to provide a system with graphics that would be “easily interpreted by a referring physician,” as taught by Langlotz (col 4, ll. 50-58).

44. Uber teaches within the same field of endeavor: liquid display means (52 and 54 fig 3a; col 6, ll. 31-52; col 9, ll. 2-12), liquid storage means (col 6, ll. 31-52; col 9, ll. 2-23), liquid reading means (col 6, ll. 31-52; col 9, ll. 2-23), liquid input means (col 6, ll. 31-52; col 9, ll. 2-23), condition storage means (col 6, ll. 31-52; col 9, ll. 2-23), operation reading means (col 6, ll. 31-52; col 9, ll. 2-23), operation adjusting means (col 6, ll. 31-52; col 9, ll. 2-23), and liquid items represent the concentration of an effective component of the contrast medium (col 6, ll. 31-52; col 8, ll. 8-16; Table 1 teaching relationship between liquid item type/concentration and volume of Iodine).

45. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duchon in view of Langlotz further in view of Uber in order to “continuously adjust fluid [parameters]...to optimally adapt the dosing to patient specific parameters...saving money and reducing patient risk ” as taught by Uber (col 10, ll. 31-47). While it is not specifically stated that the contrast type is displayed, a variety of other stored data is displayed, and it would be an obvious modification to also display the contrast type (product name).

46.

47. Regarding claim 38, Duchon in view of Langlotz and Uber discloses the method of injecting a contrast medium with a liquid injection mechanism as claimed and as

Art Unit: 3737

discussed above. However, it is not positively recited that a computer program, or software, is used to perform the method as claimed. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a computer program in conjunction with the computer hardware to perform the method steps because both hardware and software is necessary to operate a computer.

48. Regarding claim 39, Duchon in view of Langlotz and Uber discloses the method of injecting a contrast medium with a liquid injection mechanism as claimed and as discussed above. Furthermore, it would have been obvious to use a computer program to perform the method as claimed. However, it is not positively recited that an information storage medium is used to store the data of the computer program. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an information storage medium, such as a CD-ROM, floppy disk or solid state flash drive, to store the data of the computer program in order to transfer, install or archive the computer program.

### ***Response to Arguments***

Applicant's arguments filed 3/3/08 have been fully considered but they are not persuasive.

Applicant concludes, "Therefore, the operator must determine the product concentration based upon the product name and perform the necessary calculations, which can introduce complexity and error to the operation." However, examiner respectfully disagrees. Uber discloses that the contrast type is stored in the system

Art Unit: 3737

memory and is updated after using the system. In addition, the system is able to warn the operator if the wrong contrast media was connected for a particular procedure (column 6, lines 45-52 and column 9, lines 1-6). While the term "product name" is not used, "contrast type" refers to the different types of contrast, or products. This implies that a variety of contrast types are available. Uber does not require that the operator perform any type of calculation, the system automatically determines the appropriate concentration.

While it is not specifically stated that the contrast type is displayed, a variety of other stored data is displayed, and it would be an obvious modification to also display the contrast type (product name).

In addition, even if there is some difference between applicant's claimed "product names" and the contrast types of Uber, such a modification would be obvious to one of ordinary skill in the art. The system of Uber is capable of selecting virtually any concentration of contrast media desired for any given procedure (column 2, lines 20-31). Therefore, lacking any criticality or unexpected results, the system of Uber achieves the same end result, that of selecting the appropriate concentration, and would be a suitable equivalent to the concentration selection of applicant's invention.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 3737

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Cwern whose telephone number is (571)270-1560. The examiner can normally be reached on Monday through Friday 9:30AM - 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3737

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan G Cwern/  
Examiner, Art Unit 3737

/BRIAN CASLER/  
Supervisory Patent Examiner, Art  
Unit 3737